



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,784	10/19/2001	Keld Lange	Q66664	6691

7590 08/08/2005

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
2100 Pennsylvania Avenue, N.W.
Washington, DC 20037-3213

EXAMINER

BHATTACHARYA, SAM

ART UNIT	PAPER NUMBER
----------	--------------

2687

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,784

Applicant(s)

LANGE ET AL.

Examiner

Sam Bhattacharya

Art Unit

2687

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 19-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20050428</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 4/28/05 was filed after the mailing date of the non-final Office Action on 10/22/04. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

3. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings filed on 10/19/01 are informal. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Art Unit: 2687

5. Claims 1, 6-12 and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Sriram (US 6,366,606).

Regarding claims 1 and 10, Sriram teaches a base station a radio operated telecommunications system with a receiver (Col. 1 lines 31-35) for processing received information, and a digital signal processor (Col. 2 line 34), for performing Symbol rate processing and at least parts of chip rate processing (Col. 4 lines 36-41 and Col. 5 lines 19-33, 51-60).

Regarding claim 6, Sriram teaches memory which can be suitable for the intermediate storage of the received information (Col. 1 lines 45-50 and Col. 2 lines 29, 49-54).

Regarding claim 7, Sriram teaches despreading of the received information by a signal processor (Col. 6 lines 34-35).

Regarding claim 8, Sriram teaches decoding of the received information (Col. 5 lines 51-60).

Regarding claim 9, Sriram teaches a receiver (Col. 1 lines 31-35) for a base station or a mobile station for processing received information, and a digital signal processor (Col. 2 line 34), for performing symbol rate processing and chip rate processing (Col. 4 lines 36-41 and Col. 5 Lines 19-33, 51-60).

Regarding claims 11 and 19, Sriram teaches that the telecommunications system is CDMA (Col. 2 lines 18 and 60-67).

Regarding claim 12, Sriram inherently teaches a process for operating a radio-operated telecommunications system, wherein the information received by a base station or a mobile station is subjected to a symbol rate processing by means of a digital signal processor (Col. 2

Line 34) wherein at least part of the chip rate processing is likewise performed (Col. 4 lines 36-41 and Col. 5 lines 19-33, 51-60).

Regarding claim 20, Sriram teaches a digital signal processor including means for executing symbol rate processing, means for executing chip rate processing and means for switching over from the means for executing symbol rate processing to the means for executing chip rate processing, the digital signal processor being disposed inside the receiver. (See FIG. 2 and col. 4, lines 35-41, showing switching over between chip rate processing in co-processor 12 and symbol rate processing in the symbol rate processor 37 in receiver 10.)

Regarding claim 21, Sriram teaches that means for switching instructs for transmission of information in the digital processor first to the means for executing chip rate processing and then to the means for executing symbol rate processing. The information is transmitted to the co-processor 12 to executing the chip rate processing. See FIG. 2.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 2, 3, 13, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sriram (US 6,366,606) in view of Warty (US 4,827,499).

Regarding claims 2 and 14, Sriram fails to teach the signal processor performing task allocation for controlling the chip rate processing and the symbol rate processing. Warty teaches a call control of a distributed processing communications switching system that has processors performing task allocation (Col. 5 lines 36-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Warty into that of Sriram for the obvious reason of being able to pick which function to operate for quicker processing because it decentralizes task functionality.

Regarding claims 3 and 13, Sriram fails to specifically teach the signal processor performing chip rate processing before symbol rate processing. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to perform chip rate processing before symbol rate processing because the information must be despread before it can be decoded.

Regarding claim 16, Sriram fails to teach the distribution of the array or group of signal processors between the chip rate processing and the symbol rate processing is performed by task allocation. The limitations of the claim are rejected as the same reason set forth in claims 2 and 14 above, where it would have been obvious to incorporate the teaching of Warty into Sriram because it decentralizes task functionality.

8. Claims 4, 5, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sriram (US 6,366,606) and Warty (US 4,827,499) as applied to claims 2 and 16 above, and further in view of Komara (US 6,161,024).

Regarding claim 4, Sriram fails to teach an array or group of digital signal processors provided. Komara teaches a redundant broadband multi-carrier base station for wireless communications with a group of digital signal processors (Fig. 1, Col. 2 lines 63-66). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

Art Unit: 2687

to incorporate the teaching of Komara into that of Sriram for the obvious reason of having a plurality of processors to accommodate a plurality of users for faster processing and a backup structure for failure purposes.

Regarding claims 5 and 15, Sriram and Komara fail to teach chip rate processing and symbol rate processing distributed between sub-arrays or sub-groups of signal processors. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to distribute chip rate processing and symbol rate processing between sub-groups in order have quicker processing and to reduce complexity of the processors functions.

Response to Arguments

9. Applicant's arguments filed 4/21/05 have been fully considered but they are not persuasive.

With respect to claims 1, 6-12, 17 and 18, Applicant argues that Sriram fails to teach "at least one digital signal processor configured to perform a symbol rate processing and at least parts of a chip rate processing," as recited in claim 1. Applicant argues that Sriram does not meet this limitation because Sriram does not teach a processor to perform both types of processing.

With respect to claims 2-5 and 13-16, Applicant argues that Warty does not cure the deficiencies of Sriram. Applicant further argues that Warty teaches having a separate processor performing allocation of calls, where the processor is configured to also allocate tasks in addition to performing chip rate and symbol rate processing. Applicant argues against the combinability

of Sriram and Warty because Sriram is directed to power consumption in correlation processing, whereas Warty is directed to improving call control in a distributed switching system.

Examiner respectfully disagrees with Applicant's arguments. The claims recite *at least* one digital signal processor. Accordingly, based on the wording of the claims, a reference can meet this limitation if it teaches more than one digital signal processor that performs symbol rate processing and at least parts of a chip rate processing. Since Sriram teaches a symbol rate processor 37 performing symbol rate processing and a co-processor 12 performing chip processing, Sriram meets the limitations of claim 1. Still, even if the claims did recite a single digital signal processor for performing both kinds of processing, the Examiner does not consider it to be an inventive step to simply combine two kinds of processing into one processor. For example, one skilled in the art would have been able to construct a processor that has two sections for performing the two kinds of processing, respectively. Therefore, more structure needs to be recited in the present claims to distinguish them from Sriram.

Examiner does not rely on Warty for teaching a processor that performs chip rate and symbol rate processing. Examiner relies on Sriram for that teaching. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The combination of Sriram and Warty is proper because both references deal in wireless telecommunication systems. Accordingly, one skilled in the art would have been motivated to combine the teachings in the references for the reasons stated in the rejections.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Bhattacharya whose telephone number is (571) 272-7917. The examiner can normally be reached on Weekdays, 9-6, with first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2687

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sb


SONNY TRINH
PRIMARY EXAMINER